



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,086	02/26/2002	Taketoshi Hibi	0925-0192P-SP	8613
2292	7590	12/16/2003	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			DALAKIS, MICHAEL	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 12/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

### Office Action Summary

**Application No.**

10/082,086

**Applicant(s)**

HIBI ET AL.

**Examiner**

Michael Dalakis

**Art Unit**

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 February 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \*   c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2/02&12/02                      6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Independent claims 1 and 8 recite, *inter alia*, "optical reflector(s) for reflecting light reflected in said one of two directions, along an axis of said one of two directions." It is unclear and indefinite how the if the optical deflector is in a particular state (ON) and the light is reflected off the deflector in the corresponding direction, how the optical reflector is able to reflect light at all. It seems from the Applicant's specification that the optical reflector only reflects light when the deflector is in a particular state (OFF) and reflects light in one of the two directions but not either one or the other directions. Correction is required.

Claim 6 recites "the predetermined value". Claims 10-14 include the recitation "the control unit". There is no antecedent basis for these terms in the claims. Correction is required.

Claims 7 and 12 recite, *inter alia*, "the amount of feature". This term is unclear and indefinite. Correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Manabe et al. (US Patent 5,633,755). Manabe discloses a projection television apparatus including a beam shaping optical system (including reflector 12) and a lamp 11 (see figure 2, for example). The device also includes an optical deflector 13 for changeably reflecting light in one of two directions (towards the DMD and towards the lamp 11) and an optical reflector (DMD array 15) for reflecting light back along the same optical path of one of the directions (towards mirror 13 for DMD mirrors in OFF state).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4-10 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manabe et al. in view of Baldwin et al. (US Patent 5,369,433). Manabe discloses all that is claimed except for plural optical deflectors and reflectors associated with a plurality of colors separated out of the light source light beam and a control unit for controlling the respective

Art Unit: 2851

driving states of the lamp, optical deflector and optical reflector based on the ratio of the ON state of light outputted by an average ON ratio calculation unit. Baldwin discloses a projection device including a lamp 10, a color separating element 20 and a plurality of DMDs and reflectors, each corresponding to each of the colors (red, green and blue) separated by the color separating element 20. The device of Baldwin also controls respective driving states of the lamp, optical deflector and optical reflector based on the ratio of the ON state of light outputted by an average ON ratio calculation unit (column 5, line 10 through column 6, line 27). The ratio calculation unit of Baldwin calculates the ratio of the ON state of light with respect to the OFF state of light during a predetermined period in the order of time. (Column 5, lines 30-51). Additionally, the device of Baldwin includes an optical sensor 68 whose signal is outputted to the control unit. Finally, Baldwin discloses comparing the calculated ON ratio with a ratio (necessarily predetermined) to control the DMD pixel mirrors and thus the quantity of light reflected therefrom (column 3, lines 32-42, for example).

Thus, for at least the reason set forth above, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the projection device and light control unit of Baldwin with the projection device of Manabe for the purpose of providing increased brightness of the images displayed while minimizing the power consumed.

***Allowable Subject Matter***

8. Claims 2 and 11 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Art Unit: 2851

***Conclusion***

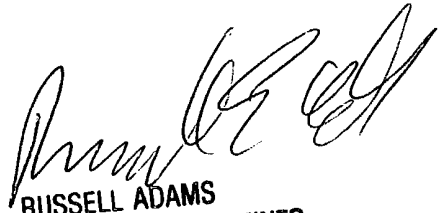
9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Dalakis whose telephone number is 703.305.4021. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 703-308-2847. The fax phone number for the organization where this application or proceeding is assigned is 703.872.9318.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.872.9317.

MD  
December 11, 2003

  
RUSSELL ADAMS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800